REMARKS

Claims 1, 3, 4, 15, 19 and 20 have been amended. New claims 36 and 37 have been added. Support for new claims 36 and 37 may be found in the specification at page 5, paragraph [0022]. Thus, no new matter has been added.

Reconsideration and withdrawal of the present rejections in view of the amendments and comments presented herein are respectfully requested.

Rejections under 35 U.S.C. §112, second paragraph

Claims 3-6, 9, 10, 12, 13, 18-22, 26-30, 33 and 35 were rejected as being indefinite based on recitation of the trademark TRITON. The claims as amended no longer recite this term. Thus, reconsideration and withdrawal of the rejections under 35 U.S.C. §112, second paragraph, are respectfully requested.

Rejection under 35 U.S.C. §103(a)

Claims 1, 3-15, 19-23, 26-31, 33 and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stathatos et al. in view of Yamada et al. (US 5,897,958), Ogawa et al. (US 6,106,955) Makita et al. (US 4,993,354) and Brill (US 3,017,282). The Office Action states that the differences between the prior art and the claimed invention include that the prior art does not expressly disclose using a 2, 4-diketone, such as acetyl acetone, a specified withdrawal speed, and other subject matter recited in the dependent claims for killing bacteria and viruses. The Examiner alleges that the prior art suggests the claimed invention by disclosing that acetyl acetone will stabilize alkyl titanate solutions and control the solubility of alkyl titanate in water The Examiner also states that since hydrolysis requires the interaction of titanium alkoxide with water, that one of ordinary skill in the art would expect that solubility of titanium alkoxide in water would affect the rate of hydrolysis. However, as explained below, this combination of references would not render the claimed invention obvious.

Claims 1 and 15 as amended recite adding a titanium alkoxide and a stabilizer consisting essentially of a 2, 4-diketone in an amount between 1 and 10% by volume of the reverse micelle solution to the reverse micelle solution and subjecting the titanium alkoxide to hydrolysis, wherein the stabilizer controls the rate of hydrolysis of the titanium alkoxide. According to

M.P.E.P. §2111.03, the term "consisting essentially of" encompasses the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. As discussed below, none of the cited prior art references suggest such a material. Accordingly, these references fail to establish a *prima facie* showing of obviousness.

The only references that mention a 2, 4-diketone is Yamada et al. and Brill. Yamada teaches that the titanium oxide sol (the first component) is stabilized by a compound having a phase transfer activity (col. 5, lines 22-25), whereas the second component (metal alkoxide or metal acetylacetonate) is only used to provide a metal oxide (col. 6, lines 40-45). Yamada et al considers an acetylacetonate to be the same as an alkoxide, a carboxylate or a chelate (col. 7, lines 42-48). Therefore, Yamada et al. neither teaches nor suggests that a stabilizer consisting essentially of a 2, 4-diketone can be used to control the rate of hydrolysis of a titanium oxide.

Brill discloses a stable aqueous titanium-containing solution obtained from an alkyl titanate and acetylacetone. However, according to the description of Brill (column 1, lines 49-56 and column 2, lines 28-43), the titanium-containing solution can only be stabilized by using acetyl acetone **in combination with** a water-soluble acid as a precipitate will be formed rapidly if the reaction mixture of an alkyl titanate and acetylacetone is contacted with water. Therefore, Brill neither teaches nor suggests that a stabilizer consisting essentially of a 2, 4-diketone (which would exclude a water-soluble acid) can be used to control the rate of hydrolysis of a titanium alkoxide. In fact, a person of ordinary skill in the art would not be motivated by Brill to omit the water soluble acid and use only a stabilizer consisting essentially of a 2, 4-diketone (acetylacetone) as presently claimed since Brill teaches that in the absence of the acid, a precipitate is rapidly formed when the alkyl titanate and acetylacetone are contacted with water.

In view of the above, based on the disclosure of the cited references, either alone or in combination, one of ordinary skill in the art would not have been motivated to utilize a stabilizer consisting essentially of a 2, 4-diketone to control the rate of hydrolysis of a titanium alkoxide as presently claimed.

In view of the amendments and comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

CONCLUSION

Applicants submit that all claims are in condition for immediate allowance. Should there be any questions concerning this application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 5/4/07

By: _____

Neil S. Bartfeld, Ph.D.
Registration No. 39,901
Agent of Record
Customer No. 20,995
(619) 235-8550

3721799
050307